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NEWS	6	Aug 26	Sequence searching in REGISTRY enhanced
NEWS	7	Sep 03	JAPIO has been reloaded and enhanced
NEWS	8	Sep 16	Experimental properties added to the REGISTRY file
NEWS	9	Sep 16	CA Section Thesaurus available in CAPLUS and CA
NEWS	10	Oct 01	CASREACT Enriched with Reactions from 1907 to 1985
NEWS	11	Oct 24	BEILSTEIN adds new search fields
NEWS	12	Oct 24	Nutraceuticals International (NUTRACEUT) now available on STN
NEWS	13	Nov 18	DKILIT has been renamed APOLLIT
NEWS	14	Nov 25	More calculated properties added to REGISTRY
NEWS	15	Dec 04	CSA files on STN
NEWS	16	Dec 17	PCTFULL now covers WP/PCT Applications from 1978 to date
NEWS	17	Dec 17	TOXCENTER enhanced with additional content
NEWS	18	Dec 17	Adis Clinical Trials Insight now available on STN
NEWS	19	Jan 29	Simultaneous left and right truncation added to COMPENDEX, ENERGY, INSPEC
NEWS	20	Feb 13	CANCERLIT is no longer being updated
NEWS	21	Feb 24	METADEx enhancements
NEWS	22	Feb 24	PCTGEN now available on STN
NEWS	23	Feb 24	TEMA now available on STN
NEWS	24	Feb 26	NTIS now allows simultaneous left and right truncation
NEWS	25	Feb 26	PCTFULL now contains images
NEWS	26	Mar 04	SDI PACKAGE for monthly delivery of multifile SDI results
NEWS	27	Mar 20	EVENTLINE will be removed from STN
NEWS	28	Mar 24	PATDPAFULL now available on STN
NEWS	29	Mar 24	Additional information for trade-named substances without structures available in REGISTRY
NEWS	30	Apr 11	Display formats in DGENE enhanced
NEWS	31	Apr 14	MEDLINE Reload
NEWS	32	Apr 17	Polymer searching in REGISTRY enhanced
NEWS	33	Jun 13	Indexing from 1947 to 1956 added to records in CA/CAPLUS
NEWS	34	Apr 21	New current-awareness alert (SDI) frequency in WPIDS/WPINDEX/WPIX
NEWS	35	Apr 28	RDISCLOSURE now available on STN
NEWS	36	May 05	Pharmacokinetic information and systematic chemical names added to PHAR
NEWS	37	May 15	MEDLINE file segment of TOXCENTER reloaded
NEWS	38	May 15	Supporter information for ENCOMPPAT and ENCOMPLIT updated
NEWS	39	May 16	CHEMREACT will be removed from STN
NEWS	40	May 19	Simultaneous left and right truncation added to WSCA
NEWS	41	May 19	RAPRA enhanced with new search field, simultaneous left and right truncation
NEWS	42	Jun 06	Simultaneous left and right truncation added to CBNB

NEWS 43 Jun 06 PASCAL enhanced with additional data
NEWS 44 Jun 20 2003 edition of the FSTA Thesaurus is now available

NEWS EXPRESS April 4 CURRENT WINDOWS VERSION IS V6.01a, CURRENT
MACINTOSH VERSION IS V6.0b(ENG) AND V6.0Jb(JP),
AND CURRENT DISCOVER FILE IS DATED 01 APRIL 2003
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NEWS PHONE Direct Dial and Telecommunication Network Access to STN
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=> s ef-tu

L1 2545 EF-TU

=> s l1 and (heat or drought or stress)

L2 132 L1 AND (HEAT OR DROUGHT OR STRESS)

=> s l1 and drought

L3 2 L1 AND DROUGHT

=> d 1-2 ti

L3 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2003 ACS

TI Maize chloroplast protein synthesis elongation factor **EF-Tu** and methods of use for same to enhance heat and **drought** tolerance

L3 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2003 ACS

TI Toward elucidating the global gene expression patterns of developing Arabidopsis: parallel analysis of 8 300 genes by a high-density oligonucleotide probe array

=> d pi

	ANSWER 1 OF 2	CAPLUS	COPYRIGHT 2003	ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
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PI	US 2003044972	A1	20030306	US 2001-810764	20010316	

=> s l2 and chloroplast

L4 20 L2 AND CHLOROPLAST

=> dup rem l4

PROCESSING COMPLETED FOR L4

L5 15 DUP REM L4 (5 DUPLICATES REMOVED)

=> d 1-15 ti

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TI Maize **chloroplast** protein synthesis elongation factor **EF-Tu** and methods of use for same to enhance **heat** and **drought** tolerance

L5 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS

DUPLICATE 1

TI Heterologous expression of maize **chloroplast** protein synthesis elongation factor (**EF-Tu**) enhances *Escherichia coli* viability under **heat stress**

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TI **Chloroplast** protein synthesis elongation factor (**EF-Tu**) and **heat** tolerance in Maize **EF-Tu** Mutant

L5 ANSWER 4 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI A maize mutant with decreased capacity to accumulate **chloroplast** protein synthesis elongation factor (**EF-Tu**) displays reduced tolerance to **heat stress**.

L5 ANSWER 5 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI Subcellular distribution and frequency of **chloroplast** protein synthesis elongation factor, **EF-Tu**, in a maize mutant with decreased capacity to accumulate **EF-Tu** under **heat stress**.

L5 ANSWER 6 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI Maize **chloroplast** protein synthesis elongation factor (**EF-Tu**) prevents thermal aggregation and inactivation of citrate synthase and malate dehydrogenase.

L5 ANSWER 7 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.

TI **Chloroplast** protein synthesis elongation factor (**EF-Tu**) and **heat** tolerance in maize **EF-Tu** mutant.

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TI **Heat-stress** induced synthesis of **chloroplast** protein synthesis elongation factor (**EF-Tu**) in a **heat-tolerant** maize line.

L5 ANSWER 9 OF 15 CAPLUS COPYRIGHT 2003 ACS

TI Toward elucidating the global gene expression patterns of developing *Arabidopsis*: parallel analysis of 8 300 genes by a high-density oligonucleotide probe array

L5 ANSWER 10 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 TI Immunogold localization of maize **chloroplast** protein synthesis
 elongation factor (**EF-Tu**) under **heat**
stress conditions.

L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
 TI The structure and gene repertoire of an ancient red algal plastid genome

L5 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 TI Maize **chloroplast** protein synthesis elongation factor (**EF-Tu**) and thermotolerance.

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
 TI Endogenous substrates of the Euglena **chloroplast** chaperonin 60
 at permissive and bleaching temperatures

L5 ANSWER 14 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
 TI A possible association between maize **chloroplast** protein
 synthesis elongation factor **EF-Tu** and **heat**
 tolerance.

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
 TI Effect of guanine nucleotides on the conformation and stability of
chloroplast elongation factor Tu

=> d 2 ab

L5 ANSWER 2 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1
 AB A **heat**-tolerant maize line, ZPBL 1304, synthesizes increased
 amts. of **chloroplast** protein synthesis elongation factor (**EF-Tu**) under **heat stress** conditions.
 Previous studies have suggested that maize **EF-Tu** may
 be involved in the development of **heat** tolerance. In this
 study, we tested the hypothesis that over-expression of maize **EF**
-Tu enhances the viability of Escherichia coli under
heat stress. The approach was to expose E. coli
 transformed with a maize **EF-Tu** expression vector
 (pTrcHis2A-Zmefu1) to 55 .degree.C and assess viability at 37 .degree.C.
 Western blots showed E. coli over-produced recombinant **EF-**
Tu protein, and the protein seemed to be in a highly sol. form.
 E. coli over-expressing maize **EF-Tu** showed increased
 viability after exposure to **heat stress**, demonstrating
 that the maize **EF-Tu** is involved in the development of
heat tolerance.

=> d so

L5 ANSWER 1 OF 15 CAPLUS COPYRIGHT 2003 ACS
 SO U.S. Pat. Appl. Publ., 26 pp.
 CODEN: USXXCO

=> d pi

L5	ANSWER 1 OF 15	CAPLUS	COPYRIGHT 2003 ACS		
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	US 2003044972	A1	20030306	US 2001-810764	20010316

=> d 3 ab

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AB Maize **EF-Tu** has an over eighty percent similarity in sequence to the prokaryotic **EF-Tu** (Bhadula et. al. 2001). Prokaryotic **EF-Tu** has been shown to act as a mol. chaperone and play a role in protecting proteins from thermal denaturation (Caldas et. al. 1998). It has been hypothesized that maize **EF-Tu** may play a role in the development of **heat** tolerance (Bhadula et. al. 2001). To shed addnl. light on the function of maize **EF-Tu** in relation to **heat** tolerance, a maize **EF-Tu** mutant (Zmefu::mum540) was studied. This maize mutant had decreased level of **EF-Tu** under high temp. conditions and displayed a reduced tolerance to **heat stress**. Also, **chloroplast** proteins from the Zmefu::mum540 (with lower levels of **EF-Tu**) showed less **heat** stability than **chloroplast** proteins from the parent wild type (wild type has higher level of **EF-Tu**). The hypothesis is that **EF-Tu** provides protection to **heat stress** by acting as a mol. chaperone.

=> d 3 so

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2003 ACS

S0 Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United States, April 7-11, 2002 (2002), CHED-292 Publisher: American Chemical Society, Washington, D. C.
CODEN: 69CKQP

=> d 4 ab

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=> d 4 so

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S0 Plant Biology (Rockville), (2002) Vol. 2002, pp. 150.
<http://www.aspb.org/meetings/>. print.
Meeting Info.: Annual Meeting of the American Society of Plant Biologists on Plant Biology Denver, CO, USA August 03-07, 2002 American Society of Plant Biologists

=> d 5 ab

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S0 Plant Biology (Rockville), (2002) Vol. 2002, pp. 148-149.
<http://www.aspb.org/meetings/>. print.
Meeting Info.: Annual Meeting of the American Society of Plant Biologists on Plant Biology Denver, CO, USA August 03-07, 2002 American Society of Plant Biologists

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S0 Plant Biology (Rockville), (2002) Vol. 2002, pp. 148.
<http://www.aspb.org/meetings/>. print.
Meeting Info.: Annual Meeting of the American Society of Plant Biologists
on Plant Biology Denver, CO, USA August 03-07, 2002 American Society of
Plant Biologists

=> d 6 au

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AU Ristic, Zoran (1); Rao, Damodara (1); Small, Gary (1); West, Rachel (1);
Momcilovic, Ivana (1)

=> d 7 ab

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=> d 7 so

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S0 Abstracts of Papers American Chemical Society, (2002) Vol. 223, No. 1-2,
pp. CHED 292. print.
Meeting Info.: 223rd National Meeting of the American Chemical Society
Orlando, FL, USA April 07-11, 2002
ISSN: 0065-7727.

=> d 8 so

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(2003) DUPLICATE 2
S0 Planta, Feb 2001. Vol. 212, No. 3. p. 359-366
Publisher: Berlin ; New York : Springer-Verlag, 1925-
CODEN: PLANAB; ISSN: 0032-0935

=> d 8 ab

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AB A **heat**-tolerant maize (*Zea mays* L.) line, ZPBL 1304, synthesizes
a unique set of five **heat**-shock polypeptides of 45 kDa. Previous
studies suggested that these polypeptides might play a role in the
development of thermotolerance in maize (Ristic et al., 1996, J. Plant
Physiol. 149:424-432; Ristic et al., 1998, J. Plant Physiol. 153:497-505).
In the present study, we isolated these polypeptides, sequenced them, and
investigated their subcellular distribution and origin. Of the five
polypeptides of 45 kDa, three polypeptides, including the two most
abundant ones, yielded amino acid sequences similar to the
chloroplast and bacterial protein synthesis elongation factor (**EF-Tu**).
This was further confirmed using an antibody
raised against maize **EF-Tu**, which showed a very strong

reaction with the 45-kDa **heat-shock** protein(s). Studies on subcellular distribution and origin revealed that the 45-kDa polypeptides were localized to the chloroplasts, and were likely of nuclear origin. A full-length maize **EF-Tu** cDNA (Zmeftul), previously isolated from the B73 line of maize, was used as a probe for northern blot analysis of RNA extracted from the ZPBL 1304 maize line (the nucleotide and deduced amino acid sequences of Zmeftul are 88% identical to the rice **EF-Tu** sequence). Northern blots showed a 1.85-fold increase in steady-state levels of **EF-Tu** mRNA during **heat stress**. An increase in **EF-Tu** transcript levels during **heat stress** was accompanied by increased levels of the **EF-Tu** protein. Isolated chloroplasts from **heat-stressed** plants also had higher levels of **EF-Tu** as compared to control chloroplasts. The maize **EF-Tu** polypeptides showed > 80% sequence similarity with the bacterial **EF-Tu**, which has recently been shown to function as a molecular chaperone and to play a role in the protection of other proteins from thermal denaturation (Caldas et al., 1998, J. Biol. Chem. 273:11478-11482). It is hypothesized that **chloroplast EF-Tu** of the ZPBL 1304 maize line plays an important role in the development of thermotolerance.

=> d 8 so

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- SO Planta, Feb 2001. Vol. 212, No. 3. p. 359-366
 Publisher: Berlin ; New York : Springer-Verlag, 1925-
 CODEN: PLANAB; ISSN: 0032-0935

=> d 10 ab

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=> d 10 so

- L5 ANSWER 10 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
- SO Plant Biology (Rockville), (2001) Vol. 2001, pp. 92. print.
 Meeting Info.: Joint Annual Meetings of the American Society of Plant Biologists and the Canadian Society of Plant Physiologists Providence, Rhode Island, USA July 21-25, 2001 American Society of Plant Biologists

=> d 11 so

- L5 ANSWER 11 OF 15 CAPLUS COPYRIGHT 2003 ACS
- SO Journal of Molecular Evolution (2000), 51(4), 382-390
 CODEN: JMEVAU; ISSN: 0022-2844

=> d 12 so

- L5 ANSWER 12 OF 15 BIOSIS COPYRIGHT 2003 BIOLOGICAL ABSTRACTS INC.
- SO Plant Biology (Rockville), (2000) Vol. 2000, pp. 104. print.
 Meeting Info.: Annual Meeting of the American Society of Plant Physiologists San Diego, California, USA July 15-19, 2000 American Society of Plant Physiologists (ASPP)

=> d 13 so

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
S0 Journal of Plant Physiology (1999), 154(2), 231-239
CODEN: JPPHEY; ISSN: 0176-1617

=> d 13 ab

L5 ANSWER 13 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 3
AB Cultures of *Euglena gracilis* grown at the moderately elevated temp. of 33.degree. experience an irreversible loss of chlorophyll and **chloroplast** function known as **heat**-bleaching. Since mol. chaperones play an important role in protein folding, we considered whether or not **chloroplast** chaperonin 60 (Cpn60) binds to nascent polypeptides and newly imported polypeptides, its likely targets for folding. In this report, we address the effect of growth temp. on the ability of **chloroplast** Cpn60 to bind endogenous substrate in vivo using pulse-labeling and co-immunopptn. with antibody against Cpn60. Four major polypeptides and about a half-dozen minor polypeptides appear to be the targets of the chaperonin complex at the permissive temp. of 23.degree.. Among the principal targets are the large subunit of Rubisco (RbcL) and elongation factor-Tu (**EF-Tu**). By contrast, only RbcL co-immunoppts. with Cpn60 in stromal exts. from partially bleached *Euglena* but at a much reduced level. Assocns. between the chaperonin and its target polypeptides resume in a partially bleached culture when returned to the permissive temp. These observations suggest that **chloroplast** chaperonin targets only a small, select group of proteins for folding. In addn., the activity of the chaperonin complex in *Euglena* is sensitive to even a modest increase in growth temp.

=> d 14 so

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S0 Plant Biology (Rockville), (1999) Vol. 1999, pp. 126. print.
Meeting Info.: Annual Meeting of the American Society of Plant Physiologists Baltimore, Maryland, USA July 24-28, 1999 American Society of Plant Physiologists (ASPP)

=> d 15 so

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
S0 Journal of Biological Chemistry (1989), 264(10), 5510-14
CODEN: JBCHA3; ISSN: 0021-9258

=> d 15 ab

L5 ANSWER 15 OF 15 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 4
AB The effect of guanine nucleotides and kirromycin on the conformation and stability of the **chloroplast** elongation factor Tu (**EF-Tu**) from *Euglena gracilis* was investigated. Free **EF-Tu** is quite thermolabile, but the protein is greatly stabilized by guanine nucleotides. The temp. dependence of the thermal inactivation of **EF-Tu** was used to calc. the amt. of stabilization energy conferred by the guanine nucleotides. GDP increases the activation energy for the denaturation process by 77 kcal/mol, whereas GTP increases the activation energy by 51 kcal/mol. The difference in **heat** stability of free **EF-Tu** and the **EF-Tu**.GDP complex was used to det. a dissocn.

const. of 1.3 .times. 10-7M at 37.degree.. The temp. dependence of the dissocn. const. allowed the calcn. of a .DELTA.H.degree.obsd of -55 kcal/mol and a .DELTA.S.degree.obsd of -146 cal/(mol degree) for GDP binding to EF-Tuchl. EF-Tuchl was found to have a trypsin-sensitive region similar to that obsd. for Escherichia coli **EF-Tu**. This loop region was protected by GTP and kirromycin but not by GDP.

=> dis his

(FILE 'HOME' ENTERED AT 09:01:13 ON 25 JUN 2003)

FILE 'AGRICOLA, CAPLUS, BIOSIS' ENTERED AT 09:01:22 ON 25 JUN 2003

L1 2545 S EF-TU
L2 132 S L1 AND (HEAT OR DROUGHT OR STRESS)
L3 2 S L1 AND DROUGHT
L4 20 S L2 AND CHLOROPLAST
L5 15 DUP REM L4 (5 DUPLICATES REMOVED)

=> s l2 and maize

L6 14 L2 AND MAIZE

=> dup rem l6

PROCESSING COMPLETED FOR L6

L7 11 DUP REM L6 (3 DUPLICATES REMOVED)

=> d 1-11 ti

L7 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2003 ACS

TI **Maize** chloroplast protein synthesis elongation factor **EF-Tu** and methods of use for same to enhance **heat** and **drought** tolerance

L7 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

TI Heterologous expression of **maize** chloroplast protein synthesis elongation factor (**EF-Tu**) enhances Escherichia coli viability under **heat stress**

L7 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2003 ACS

TI Chloroplast protein synthesis elongation factor (**EF-Tu**) and **heat** tolerance in **Maize EF-Tu** Mutant

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TI A **maize** mutant with decreased capacity to accumulate chloroplast protein synthesis elongation factor (**EF-Tu**) displays reduced tolerance to **heat stress**.

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TI Subcellular distribution and frequency of chloroplast protein synthesis elongation factor, **EF-Tu**, in a **maize** mutant with decreased capacity to accumulate **EF-Tu** under **heat stress**.

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TI **Maize** chloroplast protein synthesis elongation factor (**EF-Tu**) prevents thermal aggregation and inactivation of citrate synthase and malate dehydrogenase.

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TI Chloroplast protein synthesis elongation factor (**EF-Tu**) and **heat** tolerance in **maize EF-Tu** mutant.

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TI **Heat-stress** induced synthesis of chloroplast protein
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-tolerant **maize** line.

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TI Immunogold localization of **maize** chloroplast protein synthesis
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TI **Maize** chloroplast protein synthesis elongation factor (**EF-Tu**) and thermotolerance.

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TI A possible association between **maize** chloroplast protein
synthesis elongation factor **EF-Tu** and **heat**
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=> d 2-11 so

L7 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2003 ACS DUPLICATE 1

SO Plant Science (Shannon, Ireland) (2002), 163(6), 1075-1082
CODEN: PLSCE4; ISSN: 0168-9452

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SO Abstracts of Papers, 223rd ACS National Meeting, Orlando, FL, United
States, April 7-11, 2002 (2002), CHED-292 Publisher: American Chemical
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pp. CHED 292. print.
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